



Missouri Nursery Pest News

Office of the State Entomologist
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Timely information for Missouri's green industry!

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Recent Observations:

Fall webworm – Fall webworm has been observed in several areas of the state. This insect usually doesn't cause significant damage to the overall health of trees it attacks, but it can be harmful to the aesthetics of the landscape.

Stem girdling roots (reminder) – For those who are able to cultivate nursery fields (between rains in part of the state), remember that excessive soils which may be thrown on top of roots or near tree trunks may cause problems for the trees. Not only could it cause immediate weakening and rots if the soil remains against the tree trunks, and could provide an opportunity for the trees to be planted too deeply by landscapers, but it can also lead to a condition labeled as stem girdling roots. This condition allows roots to grow in soil which is higher than a tree's normal soil line, allowing the roots to encircle and strangle other roots as the tree grows. This eventually cuts off the normal flow of water and nutrients which weaken and could kill the tree within years (depending on growth rate and severity of condition). This condition could also be caused by allowing trees to remain in containers for too long of a period, and not properly pruning or removing encircling roots at planting time. Some have suggested a shield placed on the cultivator could prevent excessive soil buildup on the roots during cultivation. Remember also to not allow plants to remain in containers too long, and cut (or redirect) visibly encircling roots from plants during planting.

Clearwing Borers – Several species of clearwing borers have been observed in pheromone traps in recent weeks. This means preventive sprays could be effective at reducing their impact on susceptible trees. These later season pests can attack *Prunus* spp., ash, dogwood, oak, and others at this time of year. Newly planted or stressed trees are particularly vulnerable to attack.

Gypsy Moth – Statewide annual survey has yielded four (4) single moth catches to date in Missouri; 3 singles in St. Louis Co.; 1 single in Franklin Co.

Clay-colored Leaf Beetle – This leaf-feeding beetle can cause quite a bit of defoliation to a variety of trees. Honey locust seems to be especially hard hit and has been observed recently.

For more information:

Insect Defoliators of Missouri Trees: Web Producers ([Agricultural](http://www.mda.state.mo.us) publication G07271)
<http://muextension.missouri.edu/explore/agguides/pests/g07271.htm>

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<p><u>Remember:</u> Before using any chemical, always read the label carefully for directions on application procedures, appropriate rates, first aid, storage, and disposal. Make sure chemical is properly registered for use on the intended pest. Any products named are not intended as endorsements, nor is criticism implied of similar products that are not mentioned.</p>

Banded Ash Clearwing Borer

Podosesia aureocincta

Lepidoptera: Sesiidae

I. DESCRIPTION

- Creamy-white larvae with amber colored head, thoracic shield and spiracles
- Adults are wasp-like moths with brownish black bodies. The fourth abdominal segment is yellow-orange. Forewings are dark, violet brown. Bodies are 24 to 39 mm. Females are larger than males.

II. HOSTS

- Ash

III. DAMAGE

- Bore into trunk and limbs of host tree
- Disrupts translocation of water and nutrients
- Provide entryway for diseases and other insect pests

IV. LIFE CYCLE

- Overwinters as small larva inside host
- Completes development the following spring and summer
- Adult emerges and mates (approximately July through September), female lays eggs on bark of the host
- Eggs hatch in 1-2 weeks and larvae begin boring into the tree.

V. INSPECTION TIPS

- Fine or clumped sawdust-like frass exuding from small borer holes
- Small piles of frass at the base of the tree
- Emergence holes in the trunk

VI. CONTROL TIPS

- Cultural: Maintain good plant health with proper irrigation and fertilization
- Chemical: Apply Chlorpyrifos or permethrin on August 10 and September 14 (Mid-Missouri)
- Pheromone traps can be used to pinpoint adult emergence to aid in proper timing of sprays.

Red Oak Clearwing Borer

Paranthrene simulans

Lepidoptera: Sesiidae

I. DESCRIPTION

- Adult moths closely resemble yellow jacket wasps. Abdomen is yellow and black banded. Wingspan is up to 1.5 inches; Larvae are purplish-gray with black head capsule and brown thoracic shield.

II. HOSTS

- Members of red and white oak groups.

III. LIFE CYCLE

- Adult moths emerge approximately June-July, mate and deposit eggs in bark crevices.
- Eggs hatch in 15-18 days and the larvae bore into the bark and wood.
- Overwinter as larvae then continue tunneling throughout the second year.
- During the following spring, larvae pupate then adults emerge.

IV. INSPECTION TIPS

- Frass held together by a fine web will be seen emerging from small borer holes
- Sap-stained bark at the location of a borer hole
- Clearwing Oak Borers attack the lower trunk of their hosts.
- Adults are attracted to Ash/Lilac Borer pheromone traps

V. CONTROL TIPS

- Apply an appropriately labeled insecticide when adults are emerging (identify this time period with pheromone traps).

PEACHTREE BORER

Synanthedon exitiosa

Lepidoptera: Sesiidae

I. DESCRIPTION

- Adults: Males are black with a steel blue sheen with pale yellow to white bands on the thorax, abdomen and legs. The wings are clear with scales only on the margins and on the stigma of the forewing. Wingspan is approximately 27-30 mm. Female coloring is similar but they lack the yellow markings and have an orange band around the fourth abdominal segment. Female forewings have a span of approximately 35-38 mm and are completely covered with velvety, black scales.
- Larvae are creamy white with a reddish-brown head capsule and prothoracic shield.

II. HOSTS

- Most *Prunus* including peach, cherry, plum, prune nectarine, apricot and some ornamental *Prunus* shrubs.
- Often seen in nurseries in *Prunus cistena*.

III. LIFE CYCLE

- Generally one generation per year.
- Overwinter as various instar larvae.
- Larvae overwinter in a silk sack within a gummy mass in the soil or in the feeding gallery within the host plant.
- In late March (in Missouri) larvae become active and continue feeding
- Pupation occurs in the soil or in the trunk below the soil line.
- Adults emerge from late May to mid-October (in Missouri). Peak emergence occurs from mid-July to late August.
- Females lay up to 500 eggs, singly, in bark crevices and on surrounding weeds and litter.
- Adults do not feed.
- Larvae hatch and begin tunneling into the trunk until cold temperatures force obligatory diapause (late October in Missouri).

IV. INSPECTION TIPS

- Gummy exudate mixed with sawdust-like frass at or below the soil line.
- Gummosis is commonly seen in stressed *Prunus* not necessarily infested with peachtree borers. Presence of frass is a key indicator of borer infestation.
- Empty pupal cases protruding from the soil or trunk indicate previous infestation and possible current infestation.

V. CONTROL TIPS

- Cultural: Promote plant health with proper soil moisture and fertilization. Avoid injury to the trunk with mowing or cultivation equipment.
- Chemical: A traditional remedy is to apply Paradichlorobenzene in a band around the tree 2" from the trunk in late September or October. Mound soil over crystals to a height of 6" on the trunk. Use only on trees 3 years or older. Remove in 4 to 6 weeks.
- Preventative Chemical: Use pheromone traps to indicate initial emergence. About 10 days after initial emergence, apply a bark drench then retreat before residual activity of first treatment expires. Remove debris and weeds to assure good coverage of the trunk. Dursban, Thiodan (Endosulfan), Pounce, Azatin XL, Millenium or Pyrenone may be used.

VI. COINCIDE TIMING

- Apply insecticide from the time *Philadelphus* blooms until *Hydrangea paniculata* 'Grandiflora' is blooming pink